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THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application No. 10/755,932

Applicant: Steve T. Charles et al.

Filed: January 13, 2004

TC/AU: 3733

Examiner: Pedro Philogene

Docket No.: 225929 (LVM Reference No. 225929)

Customer No.: 23460

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to 37 CFR 1.97 and 1.98, the references listed on the enclosed Form PTO-1449 and/or Substitute Form PTO-1449 ("Form 1449") are submitted for consideration by the Examiner in the examination of the above-identified patent application.

The full consideration of the references in their entirety by the Examiner is respectfully requested and encouraged. Also, it is respectfully requested that the references be entered into the record of the present application and that the Examiner initial the appropriate area on the enclosed Form 1449, thereby indicating the Examiner's consideration of each of the references.

The submission of the references listed on the Form 1449 is for the purpose of providing a complete record and is not a concession that the references listed thereon are prior art to the invention claimed in the patent application. The right is expressly reserved to establish an invention date earlier than the above-identified filing date in order to remove any reference submitted herewith as prior art should it be deemed appropriate to do so.

Further, the submission of the references is not to be taken as a concession that any reference represents art that is relevant or analogous to the claimed invention. Accordingly, the right to argue that any reference is not properly within the scope of prior art relevant to an examination of the claims in the above-identified application is also expressly reserved.

The Information Disclosure Statement is being filed:

- ☐ **within** any one of the following time periods: (a) within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d); (b) within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 of an international application; (c) before the mailing date of a first Office Action on the merits; or (d) before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.537.

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- ☒ **after** (a), (b), (c) or (d) above, but before the mailing date of a final action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and includes *one* of:
- ☐ the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below).
- or*
- ☒ the fee of \$180 set forth in 37 CFR 1.17(p) (see "Fees" below).
- ☐ **after** the mailing date of a final action under 37 CFR 1.113 or a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and on or before payment of the issue fee, and includes the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).
- ☐ **after** the mailing date of a Notice of Allowance under 37 CFR 1.311, and on or before payment of the issue fee, and **within** thirty days of receiving each item of information contained in the Information Disclosure Statement, and includes the Statement under 37 CFR 1.704(d) (see "Statement under 37 CFR 1.704(d)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below). NOTE: This is for original applications except applications for a design patent, filed on or after May 29, 2000, wherein a paper containing only an Information Disclosure Statement in compliance with 37 CFR 1.97 and 1.98 is being filed.

#### Copies of the References

- ☐ Copies of all of the references listed on the enclosed Form 1449 are enclosed herewith.
- ☒ Copies of U.S. patents and patent applications that are listed on the accompanying Form 1449 are not enclosed herewith. Copies of other references identified on the accompanying Form 1449 are enclosed herewith.
- ☒ For each reference not in the English language, attached is an English translation, a concise explanation of relevance, an English-language equivalent/patent, an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office pursuant to 37 CFR 1.98(a)(3).
- ☐ A copy of the foreign search report is enclosed herewith.
- ☒ The references listed on the enclosed Form 1449 were previously identified in the parent application(s) of the present application, and copies of the references were furnished at that time. Accordingly, additional copies of the references are not submitted herewith, so as not to burden the file with duplicate copies of references. The Examiner is respectfully requested to carefully review the references in accordance with the requirements set out in the Manual of Patent Examining Procedure. In accordance with 37 CFR 1.98(d), the details of the parent application(s) relied upon for an earlier filing date under 35 USC 120 in which copies of the references were previously furnished are set out below:

U.S. APPLICATIONS		STATUS ( <i>check one</i> )		
U.S. APPLICATIONS	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
1. 10/050,241	01/16/2002	x		
2.				
3.				

**Statement under 37 CFR 1.97(e)**

- ☐ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.
- ☐ The **undersigned** hereby states that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

**Statement under 37 CFR 1.704(d)**

- ☐ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 CFR 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

**Fees**

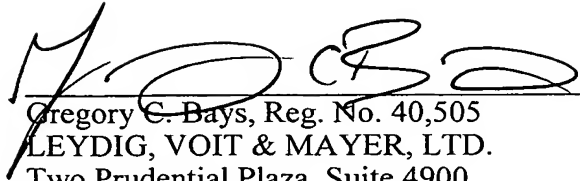
- ☐ No fee is owed by the applicant(s).
- ☒ Charge Deposit Account No. 12-1216 in the amount of **\$180.00** (37 CFR 1.17(p)).  
(A duplicate copy of this communication is enclosed for that purpose.)

**Authorization to Charge Additional Fees**


- ☒ If any additional fees are owed in connection with this communication, please charge Deposit Account No. 12-1216. (A duplicate copy of this communication is enclosed for that purpose.)

**Instructions as to Overpayment**

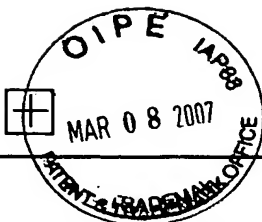
- ☒ Credit Account No. 12-1216.  
☐ Refund

  
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Date: Mach 5, 2007

<b>MAILING/TRANSMISSION CERTIFICATE UNDER 37 CFR 1.8 OR 1.10</b>			
I hereby certify that this document and all accompanying documents are, on the date indicated below, being <input checked="" type="checkbox"/> deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed in the same manner indicated on this document.			
Name (Print/Type)	Natha Conerly		
Signature		Date	March 5, 2007

Please type a plus sign (+) inside this box →



Substitute for form 1449A/B/PTO

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number	10/755,932
Filing Date	January 13, 2004
First Named Inventor	CHARLES, Steve T.
Group Art Unit	3733
Examiner Name	Pedro Philogene
Attorney Docket Number	225929

Sheet 1 of 4


## **U.S. PATENT DOCUMENTS**

Examiner Initials	Doc. No.	U.S. Patent Document		Name of Patentee or Applicant	Date of Publication	Filing Date If Appropriate
		Application or Patent Number	Kind Code			
		3923166		Fletcher et al.	December 1975	
		3949747		Hevesy	April 1976	
		4401433		Luther	August 1983	
		4527446		Borodin	July 1985	
		4573452		Greenberg	March 1986	
		4653509		Oloff et al.	March 1987	
		4688983		Lindborn	August 1987	
		4849692		Blood	July 1989	
		4945305		Blood	July 1990	
		4995402		Smith	February 1991	
		5053687		Merlet	October 1991	
		5078140		Kwoh	January 1992	
		5081381		Narasaki	January 1992	
		5086401		Glassman et al.	February 1992	
		5142930		Allen et al.	September 1992	
		5161542		Palestrant	November 1992	
		5184601		Putman	February 1993	
		5186174		Schlondorff et al.	February 1993	
		5219351		Teubner et al.	June 1993	
		5234000		Hakky et al.	August 1993	
		5240011		Assa	August 1993	
		5243266		Kasagami et al.	September 1993	
		5251127		Raab	October 1993	
		5269034		Day et al.	December 1993	
		5273039		Fujiwara et al.	December 1993	
		5279309		Taylor et al.	January 1994	
		5280427		Magnusson et al.	January 1994	
		5299288		Glassman et al.	March 1994	
		5305203		Raab	April 1994	
		5307072		Jones, Jr.	April 1994	
		5339799		Kami	August 1994	
		5343385		Joskowicz et al.	August 1994	
		5354158		Sheldon et al.	October 1994	
		5383454		Bucholz	January 1995	
		5386741		Rennex	February 1995	
		5389101		Heilbrun et al.	February 1995	
		5397323		Taylor et al.	March 1995	

Examiner Signature		Date Considered	
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\* A concise statement of relevance is being submitted in lieu of a translation. 37 CFR 1.98(a)(3).

+ An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of relevance under 37 CFR 1.98(a)(3).


Please type a plus sign (+) inside this box → 

Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/755,932
				Filing Date	January 13, 2004
				First Named Inventor	CHARLES, Steve T.
				Group Art Unit	3733
				Examiner Name	Pedro Philogene
				Attorney Docket Number	225929
Sheet	2	of	4	Client Reference No.	225929

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Examiner Initials	Doc. No.	U.S. Patent Document		Name of Patentee or Applicant	Date of Publication	Filing Date If Appropriate
		Application or Patent Number	Kind Code			
		5402801		Taylor	April 1995	
		5408409		Glassman et al.	April 1995	
		5817084		Jensen	October 1998	
		5409497		Siczek et al.	April 1995	
		5415182		Chin et al.	May 1995	
		5417210		Funda et al.	May 1995	
		5425616		Arai et al.	June 1995	
		5445166		Taylor	August 1995	
		5453686		Anderson	September 1995	
		5464013		Lemelson	November 1995	
		5494034		Schlondorff et al.	February 1996	
		5564436		Hakky et al.	October 1996	
		5564663		Cook et al.	October 1996	
		5568593		Demarest et al.	October 1996	
		5571072		Kronner	November 1996	
		5572999		Funda et al.	November 1996	
		5575798		Koutrouvelis	November 1996	
		5584292		Cheung	December 1996	
		5600330		Blood	February 1997	
		5628327		Unger et al.	May 1997	
		5630431		Taylor	May 1997	
		5640170		Anderson	June 1997	
		5643286		Warner et al.	July 1997	
		5647373		Paltieli	July 1997	
		5676673		Ferre et al.	October 1997	
		5695500		Taylor et al.	December 1997	
		5710870		Ohm et al.	January 1998	
		5744953		Hansen	April 1998	
		5748767		Raab	May 1998	
		5749362		Funda et al.	May 1998	
		5767669		Hansen et al.	June 1998	
		5769086		Ritchart et al.	June 1998	
		5776153		Rees	July 1998	
		5782764		Werne	July 1998	
		5784542		Ohm et al.	July 1998	
		5795291		Koros	August 1998	
		5797900		Madhani et al.	August 1998	

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		Application or Patent Number	Kind Code			
		5800352		Ferre et al.	September 1998	
		5800423		Jensen	September 1998	
		5803089		Ferre et al.	September 1998	
		5803912		Siczek et al.	September 1998	
		5806518		Mittelstadt	September 1998	
		5807378		Jensen et al.	September 1998	
		5817084		Jensen	October 1998	
		5820623		Ng	October 1998	
		5825536		Yasunaga et al.	October 1998	
		5828197		Martin et al.	October 1998	
		5829444		Ferre et al.	November 1998	
		5833656		Smith et al.	November 1998	
		5851183		Bucholz	December 1998	
		5865744		Lemelson	February 1999	
		5873822		Ferre et al.	February 1999	
		5887121		Funda et al.	March 1999	
		5943914		Morimoto et al.	August 1999	
		5950629		Taylor et al.	September 1999	
		5951475		Gueziec et al.	September 1999	
		5967980		Ferre et al.	October 1999	
		5976156		Taylor et al.	November 1999	
		6000297		Morimoto et al.	December 1999	
		6021342		Brabrand	February 2000	
		6024695		Taylor et al.	February 2000	
		6106511		Jensen	August 2000	
		6110112		Heywang-Koebrunner	August 2000	
		6132368		Cooper	October 2000	
		6138495		Paltieli et al.	October 2000	
		6149592		Yanof et al.	November 2000	
		6231565		Tovey et al.	May 2001	
		6233504	B1	Das et al.	May 2001	
		6236906		Muller	May 2001	
		6244809		Wang	June 2001	
		6245028		Furst et al.	June 2001	
		6309397	B1-	Julian et al.	October 2001	

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				Examiner Name		Pedro Philogene		
				Attorney Docket Number		225929		
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<b>U.S. PATENT DOCUMENTS</b>								
Examiner Initials	Doc. No.	U.S. Patent Document		Name of Patentee or Applicant	Date of Publication	Filing Date If Appropriate		
		Application or Patent Number	Kind Code					
		6322567		Mittelstadt	November 2001			
		6368332		Salcudean et al.	April 2002			
		6385509	B2	Das et al.	May 2002			
		6406472		Jensen	June 2002			
		6413264		Jensen et al.	July 2002			
		6491701		Tierney et al.	December 2002			
		6659939		Moll	December 2003			
		6665554		Charles	December 2003			
		6676669		Charles	January 2004			
		6702805		Stuart	March 2004			
		6723106		Charles et al.	April 2004			
		2001/0027313		Shimmura et al.	October 2001			
<b>FOREIGN PATENT DOCUMENTS</b>								
Examiner Initials	Doc. No.	Foreign Patent Document			Name of Patentee or Applicant	Date of Publication	Translation	
		Office	Application or Patent Number	Kind Code			Yes	No**
		EP	0009447	A1	Lande et al.	April 1980		
		EP	0649217	A1	Smith & Nephew Dyonics Inc.	April 1995		
		EP	0654244	A1	Paltliell	May 1995		
		WO	9809580	A1	Immerson Human Interface Corp.	March 1998		
		WO	9910137	A1	MicroDexterity Systems, Inc.	March 1999		
		WO	0028882	A2	MicroDexterity Systems, Inc.	May 2000		
		WO	0030557	A1	MicroDexterity Systems, Inc.	June 2000		
		WO	02060653	A2	The Acrobot Company Limited	August 2002		
<b>OTHER - NON PATENT LITERATURE DOCUMENTS</b>								
Examiner Initials	Doc. No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number (s), publisher, city and/or country where published.					Translation	
							Yes	No**
		International Search Report (06/2002)						
		SHAI-SYG Motion & Innovations Ltd.; Robolite; copy of internet home page. Applicants first became aware of this material in June 1998.						
		MicroE Inc.; copies of internet brochure pages of Rotary Micro Encoder and Linear Micro Encoder. Applicants first became aware of this material in August 1998.						
		Computer Optical Products, Inc.; copies of internet home page and application notes relating to Hathaway Motion Control. Applicants first became aware of this material in Aug. 1998.						
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